262 could be shaken off [as sugar).[122] A sugar was
137 made from the compressed pulp of a shrub fruit. Many other food plants mentioned by Pages would doubtless be identifiable by a botanist acquainted with the flora of the region.

● 264 Two meals were taken, one at sunrise, the other in the midafternoon.

283 String.---It appears that both hemp and nettle were used for making string, for, of the two plants, Pages says one grows in a moist soil and appears much like true hemp, the other, growing in dry soil, has "leaves like the walnut, ashy colored and downy, with a white flower."

276 Tobacco.---The plant was gathered in abundance and, ground with lime, was made into a paste and formed into "cones or small loaves" which were wrapped in tule leaves and hung in the house to dry. It was taken after supper, and one could subsist on it "for three days without nourishment."

Men kept their smoking tobacco, wrapped in leaves, in an antelope horn which they carried in their headbands. A most un-Yokuts-like practice is described: after supper "they set themselves to smoking tobacco, one after the other, from a great stone pipe";[123] that is, smoking after supper is Yokuts, the single great stone pipe is not. This indeed may be a truly southern Yokuts feature.

622 Chieftainship.---Like Powers, Pages attrib-
624 utes district chiefs to the Yokuts; one might have four or five villages, each with its own chief, under the authority of a superior "district" chief. The chief is said to be monogamous, to receive tribute in "seeds, fruit, game, and fish," to counsel on punishments with the advice of his constituents. The lesser chiefs kept their superior informed of events in their villages, of civil offences, and turned offender's over to him for reprimand. "During such an act of reprimand the culprit, whether man or woman, remains standing with

226 poisons: buckeye nuts ground with earth, and
278 crushed nademe leaves.[184] As the large fish became stupefied, men "gigged" them, while the women secured the smaller fish in baskets.[185]

226 Diving for fish was an indulgence of an
481 able swimmer. Such a man (J.P. was said by all who knew him to be an expert at this) would swim down under water fifteen to twenty feet and seize an unwary fish in his hand. If possible a handful of sand was taken along or grabbed off the bottom to aid in holding the slippery fish, but an expert thrust his thumb under the gills. It took much practice to do this, and the skill is better regarded as a pleasurable stunt than as a fishing method.

FOODS, UTENSILS, MEDICINES

Meals and Foods

264 Three meals a day, breakfast (wa´ad),
262 lunch (ču´ka), and supper (do´ñtau) were designated by M.L., but other informants (M. and J.P., S.G., etc.) say there were only two. Certainly two fit the general aboriginal pattern better, as known here and elsewhere. Breakfast consisted of hot acorn mush and a little meat. Everyone of any character was up before sunrise, the breakfast was eaten at about that time. The evening meal was much larger and had added to the staple mush and meat such extras as the day provided--"greens," fish, pigeons, seed cakes, and so on. The evening meal was taken just before sundown. Both men and women had "snacks" during the day; children ate as often as they pleased; this may be a continuance of the unregulated nursing pattern.

262 Generalizing about food habits, M.L. said that the Tachi did not like deer meat, that the Wukchumni did not eat larvae although "people up north" (Hoshima) did, and that the Waksachi all ate bear.[186] Coyote and fox were not eaten but wildcat and raccoon were considered very good, as were squirrels, woodrats, quail, doves, and pigeons. Some persons, amongst those whose totemic tabus permitted it, ate bear and cougar, but most people looked askance at bear meat. For instance, S.G., having no prohibitions to prevent it, once ate bear meat which was cooked rather rare. Directly he ate it, he felt nauseated and vomited the food; he maintained that this would never have happened with any other kind of meat. As for cougar meat, chiefs never touched it because this animal had been a chief in the mythical prehuman era.

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[184] Handbook, 529.

[482] [185] Fish were never put in burden baskets as the moisture softened the soaproot stiffening.

[186] Deer meat was scarce for the lake people; other informants show that the Wukchumni did eat larvae; and certain Waksachi would have died rather than eat bear meat.

●264 Meals were irregular, save for a late afternoon supper just before sundown. Snacks were taken by workers as they came home from tasks away from the village. Mayfield claimed all persons ate from a central basket by dipping in three fingers, but used small baskets for drinking.

227 Traps and weapons.--The fish trap was a cone-shaped net of milkweed fibre. Its round mouth gaped in a weir facing upstream; the fish were driven downstream into it. In shallow pools fish were caught by wading in and pouncing an open-bottomed basket over them; they were then extracted by putting a hand through the opening.

A double-pointed harpoon, one tip of which was detachable, is described by Mayfield; the pole handles were often 20 feet long. A scaffolding was constructed to spear the fish from: two poles, crossed like shears, were set butt down in deep water 10 to 15 feet from the bank, the crotch about level with the land. In this crotch were lashed the tips of two long poles whose ends rested on the bank and were some 10 feet apart. Across this frame were laid poles and leafy branches, amongst which the fisherman lay face down. As he could see fish in the shady water below, he speared them through an opening between the poles.

411 Mayfield, when a lad, was given a fine sinew-backed bow. This was about 3-1/2 feet long, wide, flat, with handgrip in center and recurved ends, and was "painted in pretty [283] colors." The string was of sinew, tied at one end and looped at the nocked end, which was unfastened when not in use. These bows were all [439] bought from the Monachi by the Choinimni and [463] taken back to them for repairs, in fact, to a certain skilled individual north of Sycamore Creek.

The Choinimnis' own simple bows were without recurved ends.

411 Excellent details of hunting, of the making of weapons, etc., are given by Mayfield 224 in a passage too long to reproduce here. The essential points are: arrow release with two fingers, three fingers for heavy bow; arrows with obsidian-tipped foreshaft for warfare and heavy game, hardwood foreshaft for light game; simple arrow for practice; bird-arrow tipped with four cross-pieces; foxskin quiver; the pigeon booth (see Michahai below); and the deer disguise. Deer and elk were snared, but the method is not described.

291 Clothing.--The man's breechclout was ten inches wide, cut from a full length of deerhide, held in place by a buckskin thong over which the clout was doubled at the back and over which the two front ends hung in a flap. Women wore a "rabbit skirt woven together like the blankets." This consisted of two knee-length aprons, the larger one in front. Cougar skins were worn about the shoulders in cold weather. Mayfield claims footgear was unknown.

DBD

[P. 177a] Chuckchansi

726 here [Chukchansi; Miwok and Mono too?] were fighting the white people. Some Indians were up on the mountainsides above the river. They got the whites down in the river canyon where they could roll rocks down on them. The whites could not see the Indians to shoot at them well, but they shot some anyway. The Indians got
727 some whites who were running away. They brought some home, made Indians of them. (There was at least one such.) This white man would fight with the Indians on their side. He was adult when they captured him; he was a soldier. He fought with the Indians after that, they said, and fought like the Indians.

That was about the end of the fighting.
728 These Indians didn't want to fight any more. The whites got pretty thick. A captain [Major
648 Savage?] came up from below with a group of white people. They gathered the Indians down this side of Fresno River and took them down to this [east] side of Madera where they gave them something to eat, flour, beef, etc., made them fight no more.

The chief that brought the whites up was Savage. He took the Indians down and gave them food. [J.R. doesn't know how long he kept them down there.] He promised them, before he died, he would give them land up here where they lived, what land they liked. They would stay there and keep the land. It would be the Indians' own home. He would give them maybe a wagon and two horses, and a plow and a harrow, and harness. They could work the horses, plow, etc. But he got sick and died. He was buried right there.[63]

He promised the Indians that, although maybe he would die, they would get these things after he died. He was going to give the Indians lots of money. But they didn't get it. Some white fellows found out. He [Savage] said to the Indians that all this land, California, belonged to the Indians. This was all written. A lot of judges have it written down that way now. But the Indians can't get it [the money] yet. They are giving the Indians a little pinch, out of the money belonging to the Indians

About twenty years ago a lawyer got information from some whites. He heard that the Indians had this money down there, and got them to contribute to pay for his going down and fighting to get it for them. But he hasn't got it yet.

SUBSISTENCE AND CLOTHING

Daily Round

512 People rose before sunrise summer and winter, said N.W. If there was no meat to eat -- sometimes there wasn't -- the men went out to catch a rabbit or whatever could be quickly
[252] got. On their return, the meat was cooked and eaten with acorn mush.

● 264 All informants said that all members of a
512 family present ate simultaneously at meals.

[63] Savage was killed by a white man in a personal quarrel (Bunnell, Discovery of the Yosemite, 285).

264 Between meals anyone who wanted to could eat;
512 cold acorn mush was always on hand. At meals, meat was divided so that everyone got a piece, however small it might be. Persons usually sat close to or at their sleeping place when eating inside the house, said J.R.

252 If the women of a household were off
593 getting seeds or at other work far from home,
512 the men would cook food so there would be a meal for them when they came home. The women did the same for the men when they were gone. When both sexes were at home, the women did the cooking. Men often cooked the meat dish, while women were preparing the acorn food.

484 People seldom went so far from home that
512 they could not return by nightfall, said J.R. Men always got back from hunting by sundown. Neither would they go far to trade. "They go a little ways, and if they don't see anyone [with whom they can encamp for the night?] they come back before night."

When men went out on a long hunt they re-
512 turned about midafternoon, said C.D. Then they ate, rested in the shade, and then went to the sweat house. After the sweat they swam, then went to their homes. After the evening meal they went to bed.

Old and young went to bed at the same
512 time, J.R. thought. The little children were
513 "wrapped in a little wildcat skin at night to
352 have a good sleep." In a well-supplied family, each person had his own coverings, rabbitskin blankets for adults, small skins for the children. The fire was kept alive all night to keep the sleepers warm.

Clothing and Ornament

291 Not much clothing was worn by the Chuk-
[281] chansi or their neighbors toward the valley, said J.R. Men made the breechclouts, prepared the skin with deer brains, cut them to fit the individual, said C.D. He thought women's breechclouts were cut exactly the same as men's. M. said men wore an apron covering back and front [possibly she means the breechclout ends]. She said that girls made fun of men who wore no clothing or only a small covering over the
[302] penis. Men wore their hair shoulder length, singed off even with a hot coal.

Tule grass skirts were worn by women, said J.R.; these were also made of shredded willow bark, said M. Skins were worn around the loins by women, or in a "diaper shape," said M. Kroeber states that the back part of a Chukchansi woman's skirt was of buckskin, the front of pounded strands of a long grass called chulochul.[84]

Both sexes used skins of deer, fox, wild-cat, or rabbit around the shoulders, said J.R. They were tied on with strings, or some people

[84] Handbook, 519.

252 of water. Then hot cooking stones were put in this acorn gruel to cook it; they were stirred constantly to prevent burning the bottom of the basket. This process was continued for two to three minutes. Each time a cooking stone was lifted out the mush was scraped from it to prevent waste. The gruel became thicker in cooking. When done, it was poured into three mush baskets and taken up to the house where the men of the family were waiting for it. "Men don't come around while acorn is being cooked." (Never, or only when this first of the season was being cooked? -- A.H.G.) They [264] ate it while it was hot. The whole hand within about one inch of the wrist was dipped in. It did not burn: "it was just hot enough not to burn."

Then the women cooked the second layer of meal the same way. The gruel produced was a bit thicker than the first. This mush was poured into baskets to cool and kept for eating during the next few days. When cooled it was quite stiff like cold cornmeal mush.

The third, bottom or "dirty," layer of meal was then treated. It was thrown in a basket of water; the meal floated, whereas the sand it unavoidably contained sank to the bottom. The floating meal was poured off, but even when so cleansed the third grade of meal was darker than the others. The mush produced was cooked like the rest but was even thicker and when cool was quite hard, making a sort of tough dark bread. Sometimes this thick mush was made into individual loaves by placing little mounds of it in a cold spring of water. There might be ten to twelve such mounds which, when congealed, were taken home and put away.

262 This work took all day. Meanwhile some of
512 the men had been hunting and had brought home
224 some game. "It is pretty near sundown now. Perhaps some fellow got a squirrel maybe a rabbit, a bird, or something. Whatever the
[252] meat, the men would cook it.[67] The women bring up the cooled acorn mush. Now it is supper time. They all eat together inside the little house."

251 When acorns were plentiful a family could get ten to twenty sacks in two or three days,
[227] said N.W. The entire family participated. White oak acorns were difficult to keep so were shelled immediately and soon used. When shelled, they were spread on flat rocks to dry, then stored in sacks which were placed on a layer of grass in the outer edge of the house. They must be kept dry. Black oak acorns were stored in their shells in granaries, but they too must remain dry.

252 Cakes of acorn meal dough were sometimes made before cooking of the whole batch was started. These were shaped in the hand and baked on hot stones. Such a stone (seen by Thrall) was about 5-1/2 inches in diameter and

[67] Men usually cooked meat, unless they were too busy; then the women did it.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29
[P. 222 a] Western Mono NS 25

Fishing

Y W 226

Fish were scarce in the upper streams in Waksachi territory, said B.O.[162] They were captured by poisoning; no spear or harpoon was used (B.O. and S.O.). (Perhaps because of the smallness of the streams in their vicinity.) A plant called ya´ohao (not soaproot, but unidentified) was mashed and scattered over the water. The fish became active, jumping around in the water, then became stupefied, when they were scooped up in fish baskets. Men prepared the poison, merely by mashing the plant leaves, but both sexes took part in capturing the fish.

Foods

Y W 263 258

Salt.---Salt was obtained from "a bush that looked like a tomato vine." While living at Čoloku (on Fisher's Ranch), S.O.'s father-in-law and his mother's sister used to gather it. To obtain the salt a pit was dug about 2 feet long, 1 foot wide, and 1 foot deep. In this a fire was built and let burn down to coals. A grating was made by laying hardwood sticks across the earth's surface and on this the plants were laid. The whole thing was fanned with a fire fan. A material then oozed out of the plants and dropped on the coals forming large lumps. Then the whole thing was covered with earth and left overnight. In the morning the pit was opened and the salt, which was now a hard large mass, was cleaned of dirt. These lumps were trimmed and sold. This salt was eaten in tiny bits with meat; it was never put directly on food or cooked with it. The plant (or grass ?) which produced this salt was called in Michahai, ti´kɨt koi´yo (smells salt), in Wukchumni, a´lɨt, and in Waksachi, u´nab¹. It was sometimes boiled and the liquid drunk to cure nausea. Salt or brackish springs were all called tuša´o.

Y W [264]

Y W [439]

Rock salt (koiyo, Michahai) was obtained in trade from the Eastern Mono

Y W 272 263

Manzanita cider.---Manzanita berries were gathered, mashed on a tray with a small pestle, and put into a sieve above a large clean mush basket. Water, poured over the mass, seeped through into the larger basket. A powdered plant called ča´mɨt (Michahai; pasida, Spanish; unidentified) was added as a thickener and flavorer. There were four or five such flavorers known, but S.O. could not name them. The manzanita drink thickened as it stood, and people came to drink it at whatever stage they preferred. It began to sour after twenty-four to forty-eight hours and was no longer thought fit to drink. S.O. insisted that it was in no sense intoxicating.

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[162] Trout should be abundant; possibly he meant scarce in comparison with the numerous varieties of the lower foothill rivers and sloughs.

[P. 224 b] Western Mono NS 25

W Y 137 192 262

tu'ba: piñon nut
wa'p: cedar
sana'uap: fir
o'pa'dra: yucca ("cactus")
o'b': yucca blossom stalks, eaten in the bud.
wo'honaba: redwood
ye'b:p: tamarack, grew at Big Meadows
tsa't:p: slippery elm
napa''ap': alder
soho'p': cottonwood
tanapo'nip': ash
pa'sitap: willow
s'hu'b': small willow
se''nowiyap: elderberry bush

W Y 372

Firemaking.--The Michahai and Waksachi made fire by striking and drilling. When flint rocks were struck, the sparks fell on a tinder of fine growth derived from oak trees (Spanish moss ?) or on rotten buckeye wood. The drill apparatus consisted of a buckeye hearth, mountain-mahogany drill, and oak-growth tinder.

Meals and Manners

W Y 264

Meals were eaten just after sunrise, about noon, and just before sunset. The midday meal was taken only by persons in camp and was little more than the casual picking up and eating of already prepared food. A man going off from home would not take food with him unless he were to be gone more than twenty-four hours. The occupations which took men away all day usually permitted them to return in the late afternoon. When gambling and playing games, men often became so absorbed that they would not stop to eat during the day. However, between the two main meals, morning and evening, there was considerable eating of odd bits, as one wanted them, of such things as honey, piñon nuts, and cooked food left over from previous meals.

W Y [415]

People never ate directly from a cooking basket. The food was apportioned in smaller coiled baskets (fig. 3, Pt. I), which were usually individual. Often two or three small children would share the food in a small basket or, in very poor families, adults might have to do the same. The three middle fingers were dipped into the mushes; gruels and soups were drunk from the edge of the basket; meat and fish were torn apart with the fingers as the cook had already hacked it up with an obsidian blade before putting it on to stew; jerked meat and fish were usually cooked by boiling in pots or baskets.

W Y 264 574

The essence of hospitality was the serving of food. The first person to recognize an approaching visitor called to him to come and eat. Custom required that a visitor go first to the chief's house, where he was given food; no one necessarily ate with him unless a meal were in course. Then, unless he were a winatum whose business kept him with the chief, he was called

W Y 264 574 from house to house. "He went the rounds and never declined" (S.O.). This procedure was not followed with persons whose intimate connections in a village took them there frequently.

W Y 576 A person approaching a house shouted or otherwise drew attention to himself. To approach quietly was looked upon with suspicion.

The Waksachi greeting used by B.O. was hani ʼ'iwaʼü ñwa [one word]. This he claimed was wholly aboriginal although the translation is practically the "How are you?" of European culture. The proper or expected reply was nasu ʼmi naü ñwa tsatsa ʼmo (all of us well, or satisfactory).

W Y [888] Any old man might be called [paternal] "uncle" as a term of good-nature and esteem, much as Europeans call any greybeard "little grandfather."

W Y 521 517 During the evening, between supper and complete darkness, or after dark in the winter, people sat around conversing. Some would be engaged in tasks such as acorn-shelling or preparing tobacco for the pre-retiring drink. They talked about their plans for ceremonies, hunting, or other occupations; particularly important were discussions of the seasonal moves to other localities for fish, acorns, seeds, etc. Older people told stories, explained the nature of the world, and prescribed conduct for youngsters. This was the only means of instruction.

W Y [869]

During the evening young people would shell acorns while some old person told stories or adventures. Stories were told only at night. S.O. recalls Etak and Wilolohi as especially fine entertainers.

W Y [525] The hand game was favorite evening entertainment as it could only be played at night, whereas the women's dice game could be played only during the day.

W Y [276] Persons wishing to induce good dreaming would foregather at a house to drink of tobacco and lime.

MANUFACTURES

Baskets

W Y 285 [177] According to D. the basketry of the Michahai and Waksachi was exactly like that of their Yokuts neighbors. From other informants we know this to be true, yet it should be pointed out that a mutual exchange has brought this about. The Mono-type cradle of twined rods and fan-shaped shade has been adopted by the Yokuts, while the Yokuts circular coiled sifting tray has been taken over by the Mono in preference to their own twined triangular sifting tray. Several shapes and their uses were distinguished by D. and may be taken as typical for all the foothill tribes, both Yokuts and Mono, between Kings River and Tule River. They are shown in figures 2 and 3, Part I. It may

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

252

[415]

Weh-puk'-in showing the method of heating water and cooking acorn gruel with hot rocks. Rocks are removed from the fire with green wooden tongs and dipped quickly into the small basket of water at the right. The resulting flash of steam removes the coating of ashes and burned acorn gruel. The rock is then dropped into the large basket of water or acorn gruel and is stirred about with the looped acorn stirrer. When the rock has lost its heat it is lifted from the basket in the loop of the stirrer and replaced in the fire. The design on the basket at the left shows "coming night." The one at the right shows "measuring worm."

At the present time we find the Indians lining the holes in the sand with cloth, generally an empty sugar sack, but we are assured by most old Indians and pioneer whites that in early days only leaves were used.

It is of particular interest to note here that *Wahumchah* is positive that the old-time *Yowlumne* lined the leaching holes in the sand with cloth. As the southern Kern County tribes *did* make cloth, it is more than probable that his statement is correct.

Much acorn bread was eaten raw from the loaf. As needed, pieces were broken off and given to the children, or eaten by their elders. [264]

From this cake was made a thick acorn soup, or mush. By the Wukchumne Yokuts it was called *ta'-pin*. To make this

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

Acorn soup was dipped from the basket with the first three fingers and placed in the mouth. Both it and the cake were very nourishing, being rich in oil and starch. A small piece the size of a base-ball is said to contain food value equal to more than an entire loaf of our bread.

To the uninitiated, acorn bread is a tremendous disappointment. To me it tasts flat and chalky, but white persons who persist are said to learn to like it.

SALT FROM SALT GRASS

There being no natural deposit of mineral salt accessible to the Yokuts Indians of the San Joaquin Valley, the obtaining of this important article of diet was a serious problem. Along the east side of the San Joaquin Valley it is quite likely that a portion of the salt used was mineral salt obtained from mountain Indians who had in turn obtained it by trade from the inhabitants of the desert region east of the Sierra, where natural deposits of this mineral were common. We are assured by old Indians that salt obtained in this way was very expensive. Many beads of shell or steatite were demanded for a few handfuls of the crude salt offered.

A large portion of the salt used by the Yokuts tribes in the San Joaquin Valley is still obtained from salt grass. Although the method of obtaining this salt has been observed by white settlers since as long ago as 1850, it is remarkable that there have been available through libraries and newspaper files no detailed accounts of the method of harvesting and refining it.

All salt grass does not bear enough salt to make it useful as a source of that material. Most persons who have walked through some fields of salt grass in the early morning have found it covered with what appeared to be heavy dew, have later had the experience of finding their shoes covered with a heavy incrustation. This is the salt used by the Yokuts.

The salt is exuded from the leaves of the salt grass and adheres to them in small globules smaller than a mustard seed. In the early morning this excretion exists as a small drop of liquid. By noon of a warm day it has become solid and by mid-afternoon is dry and hard and can be removed from the leaves of the grass by threshing.

As the grass itself is not desirable, the problem exists of removing the salt without breaking up the brittle leaves and

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

263 The salt obtained from salt grass does not taste like common table salt. It has a sour, salty taste much like that of a dill pickle. Although it is not acceptable to the untrained palate, surviving Yokuts Indians still use it for seasoning, almost to the exclusion of all other salt.

263 The salt is not all placed in cooked material. Some of it is eaten separately. A little of it is kept in a small basket or 264 clay receptacle and occasionally a small pinch is placed in the side of the mouth. This may be done while the meal is being eaten or while housework is being carried on. Some of the salt is mixed with water and cooked. After it is reduced to a thick consistency it is formed into small cakes. As needed, small pieces of this solid salt are placed in the side of the mouth and dissolved like an all-day sucker. The Tachi wet the dry salt and form it into lumps about the size of a golf ball. The children run about the camp licking these lumps.

RIVER JUNGLE GROWTH

137 Persons who have not lived along the San Joaquin Valley rivers prior to the time when they were cleared for farming and in running cattle and sheep upon their bottom land, will scarcely believe the stories told by pioneers about the wild plant growth along those streams. As late as 1900 some of this growth still existed along the Merced River and along the nearby San Joaquin, but only enough to suggest something of its previous rank nature. This jungle consisted not only of trees, but of wild grapes, several varieties of tule and willow, wild blackberries, nettles, grasses, and many other plants too numerous to mention.

It was not until the fall of 1925 that the writer became familiar with the last remaining jungle along the Kaweah river, which he was assured had been almost destroyed at that time, but which was even then beyond the belief of many persons who had lived for years within a few miles of it.

During the spring of 1931, while searching for material to be used in constructing two California Spanish-type oxcarts, I made an exploration of the remaining jungle between Lemon Cove and Visalia. A dense portion of this area lay approximately six miles east of Visalia and near East Mineral King Highway. This territory had been burned over the previous fall and did not present one-third of the growth which had existed the year before.